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Time Travel, Parahistory and the Past Artefact Dilemma

ALASDAIR RICHMOND

Abstract

In 1987, Roy Sorensen coined the term 'parahistory' to denote the study of genuinely anachronistic artefacts delivered by time travel.¹ 'Parahistory' would thus stand to history rather as parapsychology is claimed to stand to psychology, i.e. the parahistorian would study historical data that were obtained through channels that orthodox science does not recognise. How might one establish credentials as a time traveller? What sort of evidence could a time-traveller point to in support of claims that would presumably command a great deal of scepticism? While successful predictions might be one confirmatory tool, supporting evidence needn't take the form of predictions. (Although Sorensen offers an intriguing argument that a Humean about miracle-testimony would be obliged to reject *any* testimony to the occurrence of time travel.) Perhaps artefacts that time travellers retrieve from other times (past or future) could usefully supplement testimonial or predictive evidence for the parahistorian. However, this paper will argue, any appeal to past-artefactual evidence for parahistorical claims faces a dilemma that threatens to undermine its value: appeals to past-artefact evidence must either collapse into appeals to predictive evidence or see their value diminished by such past artefacts' necessarily exhibiting contradictory indicators of age and period.

1. Defining time travel

In the course of his classic defence of the logical possibility of time travel, David Lewis offered this highly influential 'discrepancy' definition of time travel:

What is time travel? Inevitably, it involves discrepancy between time and time. Any traveler departs and then arrives at his destination; the time elapsed from departure to arrival (positive, or perhaps zero) is the duration of the journey. But if he is a time

¹ Roy Sorensen, 'Time Travel, Parahistory and Hume', *Philosophy* 62 (1987), 227–236.

traveler, the separation in time between departure and arrival does not equal the duration of the journey.²

Lewisian time travel requires a distinction between personal time and external time. The former is (the closest available approximation to) time in the traveller's frame of reference and the latter is time in the world at large. (Personal time is not peculiar to persons however but rather should be considered as time as it is measured by any travelling system or object.) Personal time should reflect the most salient way of grouping the traveller's temporal parts or causal stages so (e.g.) the traveller ages properly and accumulates memory-traces correctly:

External time is simply time itself. Personal time is not some further temporal dimension, but rather the way in which time is registered by a given object: a heart beating, hair growing, a minute-hand moving, a candle burning.³

The (positive or zero) personal duration of a forward time-journey will be less than its duration measured in an external frame of reference. A backward time-journey will have positive (or zero) personal duration but *negative* external duration, i.e. in external time, the backward time traveller arrives before departing (although arrival will either succeed or be simultaneous with departure in the traveller's personal time). Any objects that travel with the time traveller should share the same reference-frame (and hence the same travel-duration) as the traveller's personal time. Assuming with Lewis that time travel is logically possible, how might claims to have travelled in time be supported? Barring direct experience, two options seem available: the alleged time traveller can produce either successful predictions or artefacts retrieved from other times. If we discount the possibility of parahistorical artefacts retrieved from parallel worlds or alternative timelines, then parahistorical artefacts could be retrieved either from the future or the past. However, past artefacts might pose the parahistorian a dilemma if deployed as evidence *for time travel*.

² David Lewis, 'The Paradoxes of Time Travel', *The American Philosophical Quarterly* **13** (1976), 145–152, cited here from *The Philosophy of Time*, (Robin Le Poidevin and Murray MacBeath (eds.)), Oxford: Oxford University Press, 1993), 134–46, 134.

³ Robin Le Poidevin, 'The Cheshire Cat Problem and Other Spatial Obstacles to Backwards Time Travel', *The Monist* **88** (2005), 336–52, 339.

2. The 'Past Artefact' Dilemma

Suppose you wish to establish your credentials as a time traveller by verifying directly the conjecture that Thomas Kyd wrote a pre-Shakespearean version of *Hamlet* (the so-called 'Ur-*Hamlet*') that was extant c. 1589.⁴ Accordingly, you time travel back to 1589 and, to your delight, are able to acquire a month-old manuscript copy of Kyd's Ur-*Hamlet*. (Call this 'MS(A)'). In 2010, you take MS(A) to renowned scholars of Elizabethan drama, (your return time-journey from 1589 having taken some 12 hours in your personal time). Alas, scholars reject out of hand both MS(A) and your claims to have visited 1589, because, despite the admittedly convincing ink, parchment and orthography (etc.), the manuscript does not appear to be correctly aged and looks instead merely like a rather unusual modern fake. It probably wouldn't avail you anything to protest: 'But had I been going to fake this manuscript, I'd have done so on paper of the correct age – the very incongruity supports my story', since such negative evidence does nothing to favour the time travel hypothesis *per se*. (In any case, deliberately including incongruous features might simply have been a double-bluff on your part.)

Measured in external time in 2010, a Kyd *Hamlet* from 1589 should be c. 421 years old. However, if MS(A) travelled with you then it presumably experienced the same elapsed proper time that you did. Thus, MS(A) shows only the wear-and-tear accumulated in one month's ordinary progression through time, plus 12 hours spent in the time machine's proper time and any ageing done in 2010 on its way to scholarly scrutiny. In terms of its physical age, MS(A) would appear to be roughly four centuries too young for authenticity.

Call pieces of evidence like chemical composition of ink, weave of paper, orthography, internal date-references, (etc.), 'period-indicators', i.e. clues as to the artefact's period or time of origin. Likewise, call pieces of evidence like discoloration of paper, fading of ink, (etc.), 'age-indicators', i.e. clues as to the artefact's age or how much elapsed time the artefact has registered since it came

⁴ See V. Østerberg, 'Nashe's 'Kid in Æsop': A Danish Interpretation', *The Review of English Studies* 18 (1942), 385–394. For sceptical views of Kyd's authorship, see Albert E. Jack, 'Thomas Kyd and the Ur-*Hamlet*', *Proceedings of the Modern Language Association of America* 20 (1905), 729–748, and Harold Bloom, *Shakespeare: The Invention of the Human*, (New York, Riverhead, 1998), 383.

into existence. In non-time-travel contexts, the date suggested by an object's period-indicators and that suggested by its age-indicators should generally coincide. Of course, mismatches between *particular* age/period-indicators can occur for several reasons and we should not therefore make the occurrence of such mismatches definitive of either time travel or parahistorical status. The effects of (e.g.) sunlight, heat or radiation can produce anomalous mismatches between different age-indicators. Likewise, pastiches could exhibit anomalous period-indicators that seemingly came from an earlier time than their age-indicators would suggest. (Fakery will usually adequately explain a set of age-indicators that fall *en bloc* behind an artefact's period indicators.) However, by Lewis' definition, an artefact that has time-travelled from the past should exhibit divergent age-indicators and period-indicators, the latter placing the object in a period earlier than its age-indicators would suggest. We might put the problem like this: for past artefacts, age-indicators will correspond more closely to elapsed personal time while period-indicators will correspond more closely to elapsed external time. Hence, even if MS(A) exhibits every imaginable correct indicator of *period*, its parahistorical value would be severely circumscribed because its *age*-indicators would (almost certainly) all be wrong. ('Almost certainly' because in theory the script might somehow have aged in transit to exactly the right degree, i.e. contrived to telescope roughly 421 years of age-indicators into 12 hours of personal time. However, this calls either for cosmic coincidence or deliberate acceleration of ageing by the traveller – the former phenomenally unlikely and the latter itself tantamount to faking age-indicators.)

Having been rebuffed by scholars, you travel back to 1589 and secrete another Kyd-*Hamlet* manuscript in a safe place. (Call this 'MS(B)'). After your return to 2010, scholars acting on your instructions retrieve MS(B), suitably aged, from the hiding-place you specified. However, while you have now made a startling and successful prediction as to where an authentic Kyd-*Hamlet* might be found, MS(B) has not travelled through time and is thus not a genuinely parahistorical artefact. (Of course, even such predictive success is open to challenge – you might have discovered MS(B)'s location by conventional means. Time travel would probably not become the most compelling of available hypotheses even in the face of such successes.)

Perhaps the problem diminishes if the journey's ratio of external-time to personal-time is lessened? Suppose your time machine had travelled from 1589 to 2010 very slowly, i.e. so the journey took 421 years of personal time, (through which you presumably

Time Travel, Parahistory and the Past Artefact Dilemma

hibernated). In this case, MS(A) would have arrived in 2010 aged to precisely the right degree *by the normal operations of ageing*. However, by Lewis' definition, MS(A) wouldn't then have time-travelled at all but simply got older, since the trip would be identical in both duration and direction measured in external and proper time. (As Lewis' 'durational discrepancy' definition implies, there's more to time travelling than simply sitting in a time machine for a while.) Hence the parahistorian's 'past artefact' dilemma: parahistorians might be able to predict successfully where properly-aged non-parahistorical artefacts might be found or they might be able to produce genuine parahistorical artefacts that were insufficiently aged, but they can't produce properly-aged parahistorical artefacts. An artefact can either show correct indicators of age or it can be genuinely parahistorical but seemingly not both. Thus, any parahistorical appeal to historical artefacts *either* collapses into predictive claims *or* risks losing its evidential value under the apparent contradictions between period-indicators and age-indicators.

3. Conclusions

Herein, we only deal with past artefacts as evidence of parahistorical claims. (We hope to argue elsewhere that different dilemmas attend trying to build a parahistory on future artefacts.) When it comes to supporting claims of time travel, the evidential value of parahistorical past-derived artefacts seems negligible *qua* artefacts, i.e. if the claims that the artefacts are meant to support are not bolstered by additional testimonial or observational evidence, (such as successful predictions or direct observations of the past). Of course, you might try to convince hardened time travel sceptics by making them first-person witnesses of the past, e.g. by taking them along on your next visit to 1589. But such exercises would be time-travel field trips and not contemporary exercises in the assessment of parahistorical artefacts. So overall, even if time travel is possible, prospects for a purely past-artefactual parahistory look bleak.*

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